



US 20210325392A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2021/0325392 A1**
Buranda et al. (43) **Pub. Date: Oct. 21, 2021**(54) **ACTIVATED GTPASE-BASED ASSAYS AND
KITS FOR THE DIAGNOSIS OF SEPSIS AND
OTHER INFECTIONS**(60) Provisional application No. 61/941,604, filed on Feb.
19, 2014.(71) Applicant: **UNM RAINFOREST
INNOVATIONS**, Albuquerque, NM
(US)**Publication Classification**(51) **Int. Cl.**
G01N 33/573 (2006.01)
G01N 33/86 (2006.01)(72) Inventors: **Tione Buranda**, Albuquerque, NM
(US); **Jacob Ongudi Agola**,
Albuquerque, NM (US); **Soumik
BasuRay**, Dallas, TX (US); **Scarlett
Swanson**, Albuquerque, NM (US);
Angela Wandinger-Ness, Albuquerque,
NM (US); **Peter C. Simons**,
Albuquerque, NM (US); **Virginie
Bondu**, Albuquerque, NM (US)(52) **U.S. Cl.**
CPC **G01N 33/573** (2013.01); **G01N 33/86**
(2013.01); **G01N 2800/224** (2013.01); **G01N**
2800/26 (2013.01); **G01N 2333/914** (2013.01)(21) Appl. No.: **17/182,859**(22) Filed: **Feb. 23, 2021****Related U.S. Application Data**(62) Division of application No. 16/270,306, filed on Feb.
7, 2019, now Pat. No. 10,962,541, which is a division
of application No. 14/626,536, filed on Feb. 19, 2015,
now Pat. No. 10,261,084.(57) **ABSTRACT**

In one embodiment, the invention provides a method of diagnosing sepsis or a virus-related infection (often a viral hemorrhagic fever infection) in a subject by detecting and measuring the level of a set of sepsis and virus infection-associated-GTPase biomarkers in a sample obtained from the subject using multiplexed flow cytometry. Related kits are also provided. In a preferred embodiment, the invention provides point of care diagnostic methods for determining an early stage sepsis or the severity of a virus infection, especially in a hospital or other setting.